CLAIMS

1. Use of a biological material containing:

c) a three-dimensional matrix based on a hyaluronic acid derivative and optionally

d) chondrocytes and/or mesenchymal cells partially or completely differentiated towards chondrocytes,

for the preparation of a graft to be surgically implanted into a joint cartilage damaged by or to be protected against a degenerative and/or inflammatory pathology, selected from osteoarthritis and/or osteoarthrosis, rheumatoid arthritis and psoriatic arthritis.

2. The use according to claim 1, wherein, when the biological material contains the aforementioned cellular components (b) said graft is an *in vitro* cartilage tissue to be surgically implanted *in vivo* inside the inflamed joint capsule in which one of said degenerative pathologies has been established with consequent degradation of the extracellular cartilage matrix.

3. The use according to claim 2 wherein *in vitro* cartilage tissue further comprise the extracellular matrix produced by said chondrocytes or mesenchymal cells partially or completely differentiated towards chondrocytes said extracellular matrix being both inside said *in vitro* cartilage tissue and once *in vivo* implanted also inside the joint cartilage affected by one of said degenerative pathologies.

4. The use according to anyone of claims 1-3, wherein said grafts are to be surgically into joint cartilage in the early stages of one of said degenerative diseases.

5. The use according to claim 4 wherein said grafts are to be surgically implanted at the beginning of the process of degradation of the molecules that make up the extracellular matrix of the cartilage.

6. The use according to anyone of claims 1-3 wherein said grafts are to be surgically implanted in the later stages of said pathology too, when moderately and/or badly damaged areas of cartilage can be seen.

7. The use according to anyone of claims wherein the average molecular weight of hyaluronic acid in the hyaluronic acid derivative range between 1x 10^5Da and 1x 10^6Da.

8. The use according to claim 7, wherein the average molecular weight of

hyaluronic acid range between 200,000 and 750,000 Da.

9. The use according to anyone of claims 1-8, wherein the hyaluronic acid derivative is selected from the class consisting of:

A) HA salified with organic and/or inorganic bases,

B) HA esters with alcohols of the aliphatic, araliphatic, cycloaliphatic, aromatic, cyclic and heterocyclic series,

C) HA esters with alcohols of the aliphatic, araliphatic, cycloaliphatic, aromatic, cyclic and heterocyclic series.

D) O-sulphated derivatives of HA,

E) inner esters of HA with a percentage of esterification that does not exceed 20%,

F) Deacetylated derivatives of HA obtained by the deacetylation of the N-acetyl-glucosamine fraction,

G) percarboxylated derivatives of HA obtained by oxidising the primary hydroxyl of the N-acetyl-glucosamine fraction with a degree of percarboxylation ranging between 0.1 and 100%.

10. The use according to claim 9, wherein the HA derivative belongs to class(A) it is obtained by treating hyaluronic acid with sodium hydroxide.

11. The use according to claim 9, wherein, when the HA derivative belongs to class (B) it has a percentage of esterification ranging from 50 to 100%,and the remainining percentage of unesterified HA is salified with organic or inorganic base.

12.The use according to claim 11, wherein said base is sodium hydroxide.

13.The use according to claim 9, wherein when the HA derivative belongs to class (C) it has a percentage of amidation ranging between 0.1 and 50% and the remaining portion is salified with organic and/or inorganic bases.

14. The use according to claim 13 wherein said base is sodium hydroxide.

15. The use according to claim 9, wherein when the HA derivative belongs to class (D) it has from 1 to 4 $-OSO_3H$ group per saccharide unit.

16. The use according to claim 9 wherein when the HA derivative belongs to class (E) it has a degree of esterification ranging from 0.05 to 10%, and the remaining percentage of non-esterified HA may be salified with organic and/or inorganic

bases.

17. The use according to claim 16, wherein said base is sodium hydroxide.

18. The use according to claim 9, wherein when the HA derivative belongs to class (E) it has a percentage of deacetylation ranging between 0.1 and 30% and all the carboxy groups of HA are salified with organic and/or inorganic bases.

19. The use according to claim 18, wherein said base is sodium hydroxide.

20.The use according to claim 9, wherein, when the HA derivative belongs to class (G), it has a degree of percarboxylation ranging from 25 to 75% and all the carboxy groups are salified with organic and/or inorganic bases.

21. The use according to claim 20, wherein the base is sodium hydroxide.

22. The use according to anyone of claims 1-21, wherein said three-dimensional matrix is in a form selected from the group consisting of: a non-woven tissue, a tissue, microspheres, and a sponge.

23. The use according to anyone of claims 1-22, wherein said HA derivative is a hyaluronic acid ester belonging to class (A).

24. The use according to claim 23 wherein said HA ester is the benzyl ester having a percentage of esterification ranging from 75 to 100%.

25. The use according to claim 24, wherein said benzylester has a percentage of esterification of 100% and is in the form of a non-woven tissue.